

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

IN THE MATTER OF REMEDIAL ACTION
BY:

The U.S. Department of the Navy,

Jackson Park Housing Complex/
Naval Hospital Bremerton
Bremerton, Washington

AMENDED ENFORCEMENT ORDER

No. DE 92TC-005

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1 **I. JURISDICTION**

2 1.1 This Amended Order (Order) is issued pursuant to the authority of RCW
3 70.105D.050(1).
4

5 **II. STATEMENT OF FACTS**

6 2.1 The Jackson Park Housing Complex/Naval Hospital Bremerton (JPHC-NHB)
7 (“the Site”) is located in Kitsap County, at Ostrich Bay, near Bremerton, Washington. The term
8 “Site” means the same as “facility” as defined at RCW 70.105D.020(4). The Site is located
9 between Ostrich Bay to the east and Austin Drive to the west. It is roughly one-half mile in
10 width east to west and one mile in length north to south. The Site includes all potentially
11 contaminated areas within the current and previous property boundaries of the Jackson Park
12 Housing Complex (JPHC), Naval Ammunition Depot Puget Sound/Bremerton Annex, Naval
13 Ammunition Depot Puget Sound, and Naval Magazine Puget Sound. The Site also includes any
14 areas outside of these property boundaries contaminated by the migration of hazardous
15 substances originating from within these property boundaries. Ecology has geographically
16 divided the Site into five known areas of concern – Area 101, Area 101A, Area 103, Area 110,
17 and Area 115. These areas of concern within the Site are described below and are illustrated in
18 Exhibit A, attached hereto.¹ Hazardous substance releases at the Site may pose a threat to human
19 health and the environment and require remedial action.

20 2.2 Area 101 encompasses the Ostrich Bay shoreline areas of the JPHC south of
21 Elwood Point. It is the location of former ordnance production and demilitarization activities,
22 and wastewater discharges. Discharges are reported to have included untreated demilitarization
23

24 ¹ The Record of Decision (ROD) for Operable Unit 1 (OU 1), incorporated as part of this Order by
25 reference in Section 4.2, refers to the areas of concern as “site” or “sites.” Any past or future use of the terms “site”
26 or “sites” when referring to the areas of concern within the Site shall mean the same as “area.”

1 wastewater, as well as sanitary, cleanup, and stormwater flows. The discharges occurred from
2 approximately 1908 to 1959. The predominant ordnance compounds handled included
3 Composition B, Tetryl, Amatol, RDX, Explosive D, smokeless powder, various propellants, and
4 any associated byproducts.

5 2.3 Area 101A is located in the vicinity of Root Court road, upland of the former oil
6 pier, within the area designated as Area 101. Contamination at Area 101A is primarily
7 associated with underground storage tanks, but also include contaminants found at other areas at
8 the JPHC-NHB.

9 2.4 Area 103 consists of former fill and trash/ordnance burning areas located along
10 the shoreline from Elwood Point northward, and includes the Naval Hospital and immediate
11 upland areas. Ash and debris remaining from the burning operations are reported to have been
12 used in nearshore filling operations. Hazardous substance residues may have been generated
13 from the burning operations, with subsequent releases into the environment. Area 103 has also
14 been used for the disposal of garbage and ordnance items. Area 103 is currently being used as a
15 recreation area.

16 2.5 Area 110 consists of the portion of the Site upland of Area 101 and 103 which
17 may also have been contaminated with ordnance and ordnance production compounds as a result
18 of past site activities. Included in Area 110 are the bunkers and surrounding areas formerly used
19 for small-arms ammunition storage, located immediately south of the current JPHC-NHB
20 property boundaries.

21 2.6 Area 115 consists of the marine waters, sediments, and biota which have received
22 hazardous substances as a result of past site activities at the JPHC-NHB.

23 2.7 The Department of the Navy (Navy) is the owner and operator of the Jackson Park
24 Housing Complex/Naval Hospital Bremerton (JPHC-NHB) ("the Site") and is a "Potentially
25 Liable Person" for remedial actions which are required at the Site.
26

1 2.8 The foregoing information is contained in the following documents:

- 2 • Heath, J.C., et al. 1983. Navy Assessment and Control of Installation
3 Pollutants: Initial Assessment Study at Naval Submarine Base Bangor,
4 Bremerton, Washington.
- 5 • Hart Crowser, Inc. 1988. Draft Current Situation Report – Sites 101 and 103,
6 Jackson Park Complex, Bremerton, Washington.
- 7 • URS Consultants, Inc. 1991. Draft Work Plans – Jackson Park Housing
8 Complex, Bremerton, Washington (Sites 101, 103, 110, and 115 (offshore
9 areas)).
- 10 • URS Consultants, Inc. 1991. Draft Project Plans, Site 101A Remedial
11 Investigation/Feasibility Study Supplement, Puget Sound Naval Shipyard,
12 Jackson Park Housing Complex, Bremerton, Washington.
- 13 • Conlow, Judy. 23 December 1991. Letter from the Navy to Mike Bowlus,
14 Army Corps of Engineers, regarding the Small-Arms Ammunition Bunker
15 Area.

16 2.9 On February 18, 1992, pursuant to RCW 70.105D.050(1), the Washington State
17 Department of Ecology (Ecology) issued Enforcement Order No. DE-92-TC-112 to require the
18 Navy to complete a remedial investigation and feasibility study at the Site in accordance with
19 chapter 173-340 WAC.

20 2.10 On May 2, 1994, Ecology amended Enforcement Order No. DE-92-TC-112 to
21 recognize and give effect to the provisions of the Defense/State Memorandum of Agreement
22 (DSMOA), entered into by the State of Washington and Department of Defense on February 3,
23 1994.

24 2.11 In 1994, the Jackson Park Housing Complex/Naval Hospital Bremerton (JPHC-
25 NHB) (“the Site”), Bremerton, Washington, was placed on the National Priorities List. In May
26 1995, the Site was administratively divided into Operable Unit 1 (OU 1) and Operable Unit 2

(OU 2). In 2000, the Site was further administratively divided to create Operable Unit 3 (OU 3). In 2001, OU 3 was administratively divided to create Operable Unit 3 Terrestrial (OU 3T) and Operable Unit 3 Marine (OU 3M).

A. OU 1 consists of the terrestrial environment (Areas 101, 101A, 103, and 110), and addresses the human health risks associated with both the terrestrial environment and the marine environment (ingestion of shellfish from Ostrich Bay).

B. OU 2 consists of the marine environment (Area 115), and addresses any associated ecological risks to the marine environment.

C. OU 3T consists of the terrestrial environment (Areas 101, 101A, 103, and 110), and addresses the risks associated with abandoned ordnance located in the terrestrial environment.

D. OU 3M consists of the marine environment (Area 115), and addresses the risks associated with abandoned ordnance located in the marine environment.

2.12 This second amendment of Enforcement Order No. DE-92-TC-112 addresses remedial actions at OU 1, OU 2, OU 3T, and OU 3M.

III. ECOLOGY DETERMINATIONS

3.1 The Navy is an "owner and operator" as defined at RCW 70.105D.020(12) of a "facility" as defined in RCW 70.105D.020(4).

3.2 The facility is known as the Jackson Park Housing Complex/Naval Hospital Bremerton (JPHC-NHB) ("the Site") and is located east of Austin Drive, and north and east of State Highway 3, at Ostrich Bay near Bremerton, Washington.

3.3 The substances found at the facility described above are "hazardous substances" as defined at RCW 70.105D.020(7).

1 3.4 Based on the presence of these hazardous substances at the facility and all factors
2 known to Ecology, there is a release or threatened release of hazardous substances from the
3 facility, as defined at RCW 70.105D.020(20).

4 3.5 By letter dated July 30, 1991, Ecology notified the Navy of its status as a
5 "potentially liable person" under RCW 70.105D.040 after notice and opportunity for comment.

6 3.6 Pursuant to RCW 70.105D.030(1) and 70.105D.050, the Department may require
7 potentially liable persons to investigate or conduct other remedial actions with respect to the
8 release or threatened release of hazardous substances, whenever it believes such action to be in
9 the public interest

10 3.7 Based on the foregoing facts, Ecology believes the remedial action required by
11 this Order is in the public interest.

12 13 **IV. STATUS OF REMEDIAL ACTIONS**

14 15 **Operable Unit 1**

16 4.1 In April 1998, a Remedial Investigation/Feasibility Study (RI/FS) for OU 1,
17 incorporating data collected through 1997, was completed. Several additional studies were
18 conducted at OU 1 between 1997 and 1999.

19 4.2 The alternatives considered for OU 1 were presented and evaluated in the
20 Proposed Plan made available to the public in October 1999. A Record of Decision (ROD) that
21 selected remedial actions for OU 1 was executed on August 10, 2000. The ROD for OU 1,
22 which is attached hereto as Exhibit B, is hereby incorporated by reference and is an integral and
23 enforceable part of this Order.

24 4.3 The Navy submitted the following deliverables in support of the implementation
25 of the remedial actions identified in the OU 1 ROD for Ecology review and approval:
26

1 A. The Final Benzene Seep Work Plan was submitted to Ecology in March 2001 and
2 was approved by Ecology in April 2001. The Work Plan, which is attached hereto
3 as Exhibit C, is hereby incorporated by reference and is an integral and
4 enforceable part of this Order.

5 B. The Draft Work Plan – PAH Area at Site 110 was submitted to Ecology on
6 December 14, 2001. Ecology submitted comments to the Navy on January 3,
7 2002.

8
9 **Operable Unit 2**

10 4.4 In July 1998, an RI/FS for OU 2 was completed.

11 4.5 The Navy submitted the Draft Final Proposed Plan for OU 2 for Ecology review
12 and approval in July 2001. Ecology submitted comments to the Navy on the Draft Final
13 Proposed Plan in August 2001. The Navy has not resubmitted a draft final document or
14 responses to Ecology's comments.

15
16 **Operable Unit 3 (Terrestrial and Marine)**

17 4.6 Two Action Memoranda (AM) were signed in 2000 to address cleanup of
18 abandoned ordnance in the marine and nearshore terrestrial environments. No RI/FS has been
19 prepared for either OU 3T or OU 3M.

20
21 **V. WORK TO BE PERFORMED**

22 5.1 Based on the foregoing Facts and Determinations, it is hereby ordered that the
23 Navy take the following remedial actions and that these actions be conducted in accordance with
24 chapter 173-340 WAC and chapter 173-204 WAC unless otherwise specifically provided for
25 herein.

Remedial Deliverables and Schedule

5.2 The Navy shall submit deliverables in support of the implementation of the remedial actions identified in the OU 1 ROD for Ecology review and approval in accordance with the schedule shown below:

- A. Draft Schedule for completion of selected remedial actions submitted to Ecology within 30 calendar days of the effective date of this amendment of the Order.
- B. Draft Final Work Plan – PAH Area at Site 110 resubmitted to Ecology within 30 calendar days of the effective date of this amendment of the Order.
- C. Draft Operation and Maintenance Plan submitted to Ecology by July 1, 2002.
- D. Draft Compliance Monitoring Plan submitted to Ecology within 30 calendar days of the effective date of this amendment of the Order.
- E. Draft Institutional Control Measures Plan (one plan for Jackson Park and one plan for Naval Hospital Bremerton) submitted to Ecology by November 3, 2003.

5.3 The Navy shall submit deliverables in support of OU 2 for Ecology review and approval in accordance with the schedule below:

- A. Draft Cleanup Action Plan (CAP) submitted to Ecology by May 1, 2003.
Pursuant to WAC 173-340-380(4), the Navy need not submit a draft CAP for OU 2, provided the Navy resubmits a draft final proposed plan, prepared under the federal cleanup law, by May 1, 2003 and submits a draft ROD, prepared under the federal cleanup law, by December 1, 2003.
- B. Draft Schedule for completion of selected remedial actions submitted to Ecology within 30 calendar days of the issue date of the final CAP/final ROD for OU 2.
- C. If required pursuant to chapter 173-340 WAC, then a Draft Operation and Maintenance Plan shall be submitted to Ecology within 6 months of the issue date of the final CAP/final ROD for OU 2.

- 1 D. If required pursuant to chapter 173-340 WAC, then a Draft Compliance
2 Monitoring Plan shall be submitted to Ecology within 6 months of the issue date
3 of the final CAP/final ROD for OU 2.
- 4 E. If required pursuant to chapter 173-340 WAC, then a Draft Institutional Control
5 Measures Plan (one plan for Jackson Park and one plan for Naval Hospital
6 Bremerton) shall be submitted to Ecology within 1 year of the issue date of the
7 final CAP/final ROD for OU 2.
- 8 5.4 The Navy shall submit deliverables in support of OU 3T for Ecology review and
9 approval in accordance with the schedule below:
- 10 A. Draft Preliminary Assessment / Site Investigation submitted to Ecology by August
11 15, 2002.
- 12 B. Draft Remedial Investigation Work Plan submitted to Ecology by October 15,
13 2002.
- 14 C. Draft Remedial Investigation Report submitted to Ecology by January 16, 2006.
- 15 D. Draft Feasibility Study submitted to Ecology by October 16, 2006.
- 16 E. Draft CAP submitted to Ecology by February 15, 2007. Pursuant to WAC 173-
17 340-380(4), the Navy need not submit a draft CAP for OU 3T, provided the Navy
18 submits a draft proposed plan, prepared under the federal cleanup law, by
19 February 15, 2007 and submits a draft ROD, prepared under the federal cleanup
20 law, by February 15, 2008.
- 21 F. Draft Schedule for completion of selected remedial actions submitted to Ecology
22 within thirty (30) calendar days of the issue date of the final CAP/final ROD for
23 OU 3T.
- 24 G. If required pursuant to chapter 173-340 WAC, then a Draft Operation and
25 Maintenance Plan shall be submitted to Ecology within 6 months of the issue date
26 of the final CAP/final ROD for OU 3T.

- 1 H. If required pursuant to chapter 173-340 WAC, then a Draft Compliance
2 Monitoring Plan shall be submitted to Ecology within 6 months of the issue date
3 of the final CAP/final ROD for OU 3T.
- 4 I. If required pursuant to chapter 173-340 WAC, then a Draft Institutional Control
5 Measures Plan (one plan for Jackson Park and one plan for Naval Hospital
6 Bremerton) shall be submitted to Ecology within 1 year of the issue date of the
7 final CAP/final ROD for OU 3T.
- 8 5.5 The Navy shall submit deliverables in support of OU 3M for Ecology review and
9 approval in accordance with the schedule below:
- 10 A. Draft Preliminary Assessment / Site Investigation submitted to Ecology by July
11 15, 2003.
- 12 B. Draft Remedial Investigation Work Plan submitted to Ecology by March 15, 2004.
- 13 C. Draft Remedial Investigation submitted to Ecology by December 15, 2006.
- 14 D. Draft Feasibility Study submitted to Ecology by July 16, 2007.
- 15 E. Draft CAP submitted to Ecology by November 14, 2007. Pursuant to WAC 173-
16 340-380(4), the Navy need not submit a draft CAP for OU 3M, provided the Navy
17 submits a draft proposed plan, prepared under the federal cleanup law, by
18 November 14, 2007 and submits a draft ROD, prepared under the federal cleanup
19 law, by November 14, 2008.
- 20 F. Draft Schedule for completion of selected remedial actions submitted to Ecology
21 within thirty (30) calendar days of the issue date of the final CAP/final ROD for
22 OU 3M.
- 23 G. If required pursuant to chapter 173-340 WAC, then a Draft Operation and
24 Maintenance Plan shall be submitted to Ecology within 6 months of the issue date
25 of the final CAP/final ROD for OU 3M.
- 26

1 H. If required pursuant to chapter 173-340 WAC, then a Draft Compliance
2 Monitoring Plan shall be submitted to Ecology within 6 months of the issue date
3 of the final CAP/final ROD for OU 3M.

4 I. If required pursuant to chapter 173-340 WAC, then a Draft Institutional Control
5 Measures Plan (one plan for Jackson Park and one plan for Naval Hospital
6 Bremerton) shall be submitted to Ecology within 1 year of the issue date of the
7 final CAP/final ROD for OU 3M.

8 5.6 The Navy shall prepare and/or update a draft public participation plan for the Site
9 and submit it to Ecology within 60 calendar days of the effective date of this amendment of the
10 Order.

11 5.7 The Navy shall submit to Ecology a draft schedule which includes all key tasks to
12 accomplish submittal of the deliverables specified in this Order. The schedule shall specify
13 completion dates for each task and indicate dependencies between and among tasks.
14 Requirements for Ecology review and approval shall be identified and clearly shown on the
15 schedule.

16
17 **Review, Comment, and Approval Process for Deliverables**

18 5.8 The Navy shall submit deliverables to Ecology in accordance with the schedule
19 set forth herein. From the date of Ecology receipt of the draft document, the following process
20 will ensue:

21 A. Within thirty (30) calendar days of receiving the Navy's draft document, Ecology
22 will provide the Navy with comments.

23 B. Within thirty (30) calendar days of receiving Ecology's comments, the Navy will
24 submit to Ecology a "draft final" document along with a response to comments
25 identifying how comments were addressed.
26

- 1 C. Within thirty (30) calendar days of receiving the Navy's draft final document and
2 response to comments on the draft document, Ecology will notify the Navy in
3 writing of whether the draft final document adequately addresses Ecology's
4 comments on the draft document.
- 5 D. If Ecology identifies inadequacies in the draft final document and/or the response
6 to comments, then Ecology will, at its discretion, either revise and approve the
7 document or require the Navy to revise and resubmit the document within a
8 specified period of time for approval.
- 9 E. If Ecology does not identify inadequacies in the draft final document and/or the
10 response to comments, then Ecology will, at its discretion, approve the draft final
11 document. A draft final document only becomes "final" upon Ecology approval.
- 12 F. In accordance with WAC 173-340-350(5), prior to approval of a draft final
13 remedial investigation or feasibility study report, Ecology will provide or require
14 public notice and opportunity to comment on the document, as required under
15 WAC 173-340-600(13). After review and consideration of the comments
16 received during the public comment period, Ecology will, at its discretion, either
17 approve the document or require the Navy to revise and resubmit the document
18 within a specified period of time for approval.
- 19 G. In accordance with WAC 173-340-380(2) and 173-340-380(4), prior to approval
20 of a draft final CAP/draft final ROD, Ecology will provide public notice and
21 opportunity for comment on the document, as required under WAC 173-340-
22 600(14). After review and consideration of the comments received during the
23 public comment period, Ecology will, at its discretion, either approve the
24 document or require the Navy to revise and resubmit the document within a
25 specified period of time for approval.
- 26

1 H. In accordance with WAC 173-340-380(4), Ecology will not approve a draft final
2 ROD prepared under the federal cleanup law unless:

- 3 (1) The cleanup action meets the requirements under WAC 173-340-360;
4 (2) Ecology has concurred with the cleanup action; and
5 (3) An opportunity was provided for the public to comment on the cleanup
6 action.

7 5.9 Ecology may extend the thirty (30) calendar day period for reviewing and
8 commenting on a document by providing oral or written notification to the Navy, prior to
9 expiration of the thirty (30) calendar day period. Ecology will provide an estimate of the time
10 required for completion of its review.

11 5.10 The Navy may request an extension of the thirty (30) calendar day period for
12 submitting a document and responses to comments by providing written notification to Ecology
13 prior to expiration of the thirty (30) calendar day period. Any request for an extension by the
14 Navy shall specify:

- 15 A. The deadline that is sought to be extended;
16 B. The length of the extension sought;
17 C. The cause(s) for the extension; and
18 D. Any related deadline or schedule that would be affected if the extension were
19 granted.

20 The requested extension may be granted upon Ecology's determination that good cause exists.
21

22 **Submittal of Deliverables**

23 5.11 In accordance with WAC 173-340-840(2), the Navy shall submit to Ecology an
24 electronic copy and three (3) hard copies of each deliverable identified in this Order (including
25 both draft and draft final documents). Ecology may require additional copies to meet public
26 participation and interagency coordination needs.

Enforceability and Implementation of Deliverables

5.12 Upon approval by Ecology, the deliverables identified in this Order shall be incorporated by reference and become integral and enforceable parts of this Order, and shall be implemented by the Navy in accordance with its terms and schedules, and in accordance with the applicable laws and CAPs/RODs.

Sampling

5.13 The Navy shall allow split or replicate samples to be taken by Ecology and shall provide Ecology notification seven (7) calendar days before any sampling activity, except during an emergency. If an emergency exists, prompt oral notification shall be given of the emergency and of the Navy's intent to collect samples. A written summary of actions taken during the emergency shall be provided to Ecology within ten (10) working days.

Sampling and Field Data Submittal – General

5.14 The Navy shall provide to Ecology all validated laboratory results in both printed form and an electronic form capable of being transferred into Ecology's data management systems within forty-five (45) calendar days after initial receipt by the Navy, its consultants, contractor, or subcontractor of non-validated analytical results from the laboratory. The Navy may extend the forty-five (45) calendar day period for an additional twenty (20) calendar days by providing written notification to Ecology, prior to expiration of the initial forty-five (45) calendar day period. If preliminary analysis indicates a potential imminent and substantial endangerment to the public health, the Ecology project coordinator shall be notified immediately. Analytical backup documentation shall be provided to Ecology within ten (10) working days after receipt of Ecology's written request.

5.15 If validated data is not provided to Ecology within sixty-five (65) calendar days after initial receipt by the Navy, its consultants, contractor, or subcontractor of non-validated

1 analytical results from the laboratory, then a summary of all non-validated positive analytical
2 results shall be made available to Ecology upon request. This summary shall also include a list
3 of the compounds which were analyzed for, but not detected. Validated data shall be submitted
4 as they become available, but in no event later than ninety (90) calendar days after initial receipt
5 by the Navy, its consultants, contractor, or subcontractor of non-validated analytical results from
6 the laboratory.

7 5.16 If validated data is not provided to Ecology within sixty-five (65) calendar days
8 after initial receipt by the Navy, its consultants, contractor, or subcontractor of non-validated
9 analytical results from the laboratory, then a summary of all non-validated positive analytical
10 results shall be made available to Ecology upon request. This summary shall also include a list
11 of the compounds which were analyzed for, but not detected.

12 5.17 If requested, the Navy shall provide to Ecology in both printed form and an
13 electronic form capable of being transferred into Ecology's data management systems validated
14 results of sampling, tests, or other data generated by the Navy with respect to implementation of
15 this Order within forty-five (45) calendar days of sample collection or field testing. If validation
16 of the data is not completed within forty-five (45) calendar days, non-validated data shall be
17 made available to Ecology upon request and validated data shall be submitted as they become
18 available, but in no event later than ninety (90) calendar days after sampling or testing.

19 5.18 The Navy shall provide to Ecology within five (5) working days after receipt of
20 Ecology's written request a copy of all field investigation notes covering the specified task and
21 period of field activity.

22 23 **Sampling Data Submittal – Sediments**

24 5.19 In accordance with WAC 173-340-840(5), sediment sampling data shall be
25 submitted consistent with procedures specified by Ecology for submittal of sediment sampling
26 data, including the procedures specified in Sections 5.20 and 5.21.

1 5.20 Sediment sampling data for all required fields listed in the SEDQUAL, Sediment
2 Quality Information System, shall be entered into the provided data entry templates and
3 submitted to Ecology electronically. The required fields include, but are not limited to the
4 following: sampling dates; type (grab, core, composite); depth of penetration; and station
5 locations (latitude/longitude coordinates). Chemical concentration data shall be entered and
6 submitted in dry weight units. Electronic data must be verified to be in a format compatible with
7 the SEDQUAL information system which uses ASCII protocol, comma delimited text files prior
8 to delivery to Ecology. Verification shall be conducted by the Navy in house by importing the
9 data on templates into the SEDQUAL database available on CD ROM from Ecology, correcting
10 errors, and then exporting the corrected templates for delivery to Ecology.

11 5.21 Sediment sampling data shall be submitted to Ecology in hardcopy reports and
12 presented in both dry weight and total organic carbon normalized units in data tables showing
13 comparison to applicable state regulatory criteria.

14
15 **Records Submittal**

16 5.22 In accordance with WAC 173-340-850, the Navy shall submit a copy of any
17 records relevant to this Order within thirty (30) calendar days after receipt of Ecology's written
18 request.

19 5.23 In accordance with WAC 173-204-610(3), any sediment records required under
20 WAC 173-204-610(2) and relevant to this Order shall be submitted to Ecology within thirty (30)
21 calendar days after receipt of Ecology's written request, and made available at all reasonable
22 times for inspection by the designated project coordinator or any representative of Ecology
23 designated by the Director.

24 5.24 The Navy may extend the thirty (30) calendar day period for an additional thirty
25 (30) calendar days by providing written notification to Ecology, prior to expiration of the initial
26 thirty (30) calendar day period.

1 **Progress Reports**

2 5.25 The Navy shall submit to Ecology written or, at the discretion of Ecology, oral
3 monthly progress reports that briefly describe:

- 4 A. The actions it has taken during the previous month to implement the requirements
5 of this Order and to otherwise address the human health and environmental
6 concerns at the Site;
- 7 B. The actions scheduled to be taken during the next month;
- 8 C. All field and laboratory data packages received or generated by the Navy, its
9 consultant, contractor, or subcontractor during the previous month, including all
10 validated and non-validated data;
- 11 D. The status of the schedule compliance;
- 12 E. Deliverables submitted and the dates of submittal;
- 13 F. Deliverables anticipated for submittal during the next three months and the
14 anticipated dates of submittal;
- 15 G. Anticipated problems and proposed solutions, including technical, budget, and
16 scheduling implications;
- 17 H. Problems encountered and proposed solutions, including technical, budget, and
18 scheduling implications;
- 19 I. Problems resolved and the method of resolution, including technical, budget, and
20 scheduling implications; and
- 21 J. Key staffing changes.

22
23 **Due Dates**

24 5.26 If the final day of any time period falls on a Saturday, Sunday, or a state or federal
25 legal holiday, the time period shall be extended to the next working day. Any time period
26 scheduled to begin on the occurrence of an act or event shall begin on the day after the act or

1 event. The deliverable due date shall be considered satisfied if the deliverable is received
2 electronically on the date due, and the “original” hard copy is received within two (2) working
3 days.

4 5 **Periodic Reviews**

6 5.27 In accordance with WAC 173-340-420(3), if a periodic review of an Operable
7 Unit at the Site is required under WAC 173-340-420(2), then Ecology will conduct a periodic
8 review of that Operable Unit at least every five years after the initiation of the cleanup action for
9 that Operable Unit to ensure that human health and the environment are being protected. When
10 evaluating whether human health and the environment are being protected, Ecology will consider
11 the factors specified in WAC 173-340-420(4).

12 5.28 Pursuant to WAC 173-340-420(2) and based upon the cleanup action approved
13 for OU 1 (Exhibit B), a periodic review of OU 1 is required. Pursuant to WAC 173-340-420(3),
14 Ecology will conduct a periodic review of OU 1 at least every five years after the initiation of the
15 cleanup action for OU 1.

16 5.30 In accordance with WAC 173-340-420(3), the Navy shall submit information
17 required by Ecology to conduct a periodic review and to make determinations, based on the
18 periodic review, as to whether additional action or modification of the cleanup action is required
19 and whether future periodic reviews are required.

20 21 **VI. TERMS AND CONDITIONS OF ORDER**

22 6.1 Definitions.

23 Unless otherwise specified, the definitions set forth in chapter 70.105D RCW and chapter
24 173-340 WAC shall control the meanings of the terms used in this Order.

25 6.2 Public Notice.

26

1 RCW 70.105D.030(2)(a) requires that, at a minimum, this Order be subject to concurrent
2 public notice. Ecology shall be responsible for providing such public notice and reserves the
3 right to modify or withdraw any provisions of this Order should public comment disclose facts or
4 considerations which indicate to Ecology that the Order is inadequate or improper in any respect.

5 6.3 Remedial Action Costs.

6 A. Costs billed by Ecology pursuant to this Order shall be consistent with the
7 provisions of the DSMOA entered into by the State of Washington and Department of Defense
8 on February 3, 1994, as amended.

9 B. In the event Ecology services/oversight activities are not fully funded by the
10 DSMOA, then the Navy shall pay to Ecology costs incurred by Ecology pursuant to this Order.
11 These costs shall include work performed by Ecology or its contractors for investigations,
12 remedial actions, and Order preparation, oversight and administration. Ecology costs shall
13 include costs of direct activities and support costs of direct activities as defined in WAC 173-
14 340-550(2). The Navy shall pay the required amount within 90 days of receiving from Ecology
15 an itemized statement of costs that includes a summary of costs incurred, an identification of
16 involved staff, and the amount of time spent by involved staff members on the project. A general
17 description of work performed will be provided upon request. Itemized statements shall be
18 prepared quarterly. Failure to pay Ecology's costs within 90 days of receipt of the itemized
19 statement of costs will result in interest charges.

20 6.4 Designated Project Coordinators.

21 The project coordinator for Ecology is:

22 Name: Chris Maurer
23 Address: Toxics Cleanup Program
P.O. Box 47600
24 Olympia, WA 98504-7600
25 Telephone: (360) 407-7223
Fax: (360) 407-7154
26 E-mail: cmau461@ecy.wa.gov

1 The project coordinator for the Navy is:

2 Name: Karan Holmes
3 Address: Engineering Field Activity, Northwest
4 Naval Facilities Engineering Command
5 19917 7th Avenue, NE
6 Poulsbo, WA 98370-7570
7 Telephone: (360) 396-0080
8 Fax: (360) 396-0856
9 E-mail: holmeskl@efanw.navfac.navy.mil

10 The project coordinators shall be responsible for overseeing the implementation of this
11 Order. To the maximum extent possible, communications between Ecology and the Navy, and
12 all documents, including reports, approvals, and other correspondence concerning the activities
13 performed pursuant to the terms and conditions of this Order, shall be directed through the
14 project coordinators. Should Ecology or the Navy change project coordinators, written
15 notification shall be provided to Ecology or the Navy at least ten (10) calendar days prior to the
16 change.

17 6.5 Performance.

18 All work performed pursuant to this Order shall be under the direction and supervision, as
19 necessary, of a professional engineer or hydrogeologist, or similar expert, with appropriate
20 training, experience and expertise in hazardous waste site investigation and cleanup. The Navy
21 shall notify Ecology as to the identity of such engineer(s) or hydrogeologist(s), and of any
22 contractors and subcontractors to be used in carrying out the terms of this Order, in advance of
23 their involvement at the Site. The Navy shall provide a copy of this Order to all agents,
24 contractors and subcontractors retained to perform work required by this Order and shall ensure
25 that all work undertaken by such agents, contractors and subcontractors will be in compliance
26 with this Order.

Except when necessary to abate an emergency situation, the Navy shall not perform any
remedial actions at the Site outside that required by this Order unless Ecology concurs, in
writing, with such additional remedial actions.

1 WAC 173-340-400(6)(b)(i) requires that "construction" performed on the Site must be
2 under the supervision of a professional engineer or a qualified technician under the direct
3 supervision of a professional engineer. The professional engineer must be registered in the state
4 of Washington, except as provided in RCW 18.43.130.

5 6.6 Access.

6 Ecology or any Ecology authorized representative shall have the authority to enter and
7 freely move about all property at the Site at all reasonable times for the purposes of, inter alia:
8 inspecting records, operation logs, and contracts related to the work being performed pursuant to
9 this Order; reviewing the progress in carrying out the terms of this Order; conducting such tests
10 or collecting samples as Ecology or the project coordinator may deem necessary; using a camera,
11 sound recording, or other documentary type equipment to record work done pursuant to this
12 Order; and verifying the data submitted to Ecology by the Navy. When entering the Site under
13 chapter 70.105D RCW, Ecology shall provide reasonable notice prior to entering the Site unless
14 an emergency prevents notice. Ecology shall allow split or replicate samples to be taken by the
15 Navy during an inspection unless doing so would interfere with Ecology's sampling. The Navy
16 shall allow split or replicate samples to be taken by Ecology and shall provide Ecology seven (7)
17 days notice before any sampling activity.

18 6.7 Public Participation.

19 The Navy shall prepare and/or update a public participation plan for the Site. Ecology
20 shall maintain the responsibility for public participation at the Site. The Navy shall help
21 coordinate and implement public participation for the Site.

22 6.8 Retention of Records.

23 The Navy shall preserve in a readily retrievable fashion, during the pendency of this
24 Order and for ten (10) years from the date of completion of the work performed pursuant to this
25 Order, all records, reports, documents, and underlying data in its possession relevant to this
26 Order. Should any portion of the work performed hereunder be undertaken through contractors

1 or agents of the Navy, a record retention requirement meeting the terms of this paragraph shall be
2 required of such contractors and/or agents.

3 6.9 Dispute Resolution.

4 The Navy may request Ecology to resolve factual or technical disputes which may arise
5 during the implementation of this Order. Such request shall be in writing and directed to the
6 signatory, or his/her successor(s), of this Order. Ecology resolution of the dispute shall be
7 binding and final. The Navy is not relieved of any requirement of this Order during the pendency
8 of the dispute and remains responsible for timely compliance with the terms of the Order unless
9 otherwise provided by Ecology in writing.

10 6.10 Reservation of Rights.

11 Ecology reserves all rights to issue additional orders or take any action authorized by law
12 in the event or upon the discovery of a release or threatened release of hazardous substances not
13 addressed by this Order, upon discovery of any factors not known at the time of issuance of this
14 Order, in order to abate an emergency, or under any other circumstances deemed appropriate by
15 Ecology.

16 Ecology also reserves all rights regarding the injury to, destruction of, or loss of natural
17 resources resulting from the release or threatened release of hazardous substances from the Site.

18 In the event Ecology determines that conditions at the Site are creating or have the
19 potential to create a danger to the health or welfare of the people on the Site or in the surrounding
20 area or to the environment, Ecology may order the Navy to stop further implementation of this
21 Order for such period of time as needed to abate the danger.

22 6.11 Transference of Property.

23 No voluntary or involuntary conveyance or relinquishment of title, easement, leasehold,
24 or other interest in any portion of the Site shall be consummated by the Navy without provision
25 for continued implementation of all requirements of this Order and implementation of any
26 remedial actions found to be necessary as a result of this Order.

1 Prior to transfer of any legal or equitable interest the Navy may have in the Site or any
2 portions thereof, the Navy shall serve a copy of this Order upon any prospective purchaser,
3 lessee, transferee, assignee, or other successor in such interest. At least thirty (30) days prior to
4 finalization of any transfer, the Navy shall notify Ecology of the contemplated transfer.

5 6.12 Compliance with Other Applicable Laws.

6 A. All actions carried out by the Navy pursuant to this Order shall be done in
7 accordance with all applicable federal, state, and local requirements, including requirements to
8 obtain necessary permits, except as provided in paragraph B of this section.

9 B. Pursuant to RCW 70.105D.090(1), the substantive requirements of chapters 70.94,
10 70.95, 70.105, 75.20, 90.48, and 90.58 RCW and of any laws requiring or authorizing local
11 government permits or approvals for the remedial action under this Order that are known to be
12 applicable at the time of issuance of the Order have been included, as applicable, in the ROD for
13 OU 1, and shall be included, as applicable, in the CAPs/RODs for OU 2, OU 3T, and OU 3M,
14 and are binding and enforceable requirements of the Order.

15 The Navy has a continuing obligation to determine whether additional permits or
16 approvals addressed in RCW 70.105D.090(1) would otherwise be required for the remedial action
17 under this Order. In the event the Navy determines that additional permits or approvals
18 addressed in RCW 70.105D.090(1) would otherwise be required for the remedial action under
19 this Order, it shall promptly notify Ecology of this determination. Ecology shall determine
20 whether Ecology or the Navy shall be responsible to contact the appropriate state and/or local
21 agencies. If Ecology so requires, the Navy shall promptly consult with the appropriate state
22 and/or local agencies and provide Ecology with written documentation from those agencies of
23 the substantive requirements those agencies believe are applicable to the remedial action.
24 Ecology shall make the final determination on the additional substantive requirements that must
25 be met by the Navy and on how the Navy must meet those requirements. Ecology shall inform
26 the Navy in writing of these requirements. Once established by Ecology, the additional

1 requirements shall be enforceable requirements of this Order. The Navy shall not begin or
2 continue the remedial action potentially subject to the additional requirements until Ecology
3 makes its final determination.

4 Ecology shall ensure that notice and opportunity for comment is provided to the public
5 and appropriate agencies prior to establishing the substantive requirements under this section.

6 C. Pursuant to RCW 70.105D.090(2), in the event Ecology determines that the
7 exemption from complying with the procedural requirements of the laws referenced in RCW
8 70.105D.090(1) would result in the loss of approval from a federal agency which is necessary for
9 the State to administer any federal law, the exemption shall not apply and the Navy shall comply
10 with both the procedural and substantive requirements of the laws referenced in RCW
11 70.105D.090(1), including any requirements to obtain permits.

12 13 **VII. SATISFACTION OF THIS ORDER**

14 7.1 The provisions of this Order shall be deemed satisfied upon the Navy's receipt of
15 written notification from Ecology that the Navy has completed the remedial activity required by
16 this Order, as amended by any modifications, and that all other provisions of this Order have
17 been complied with.

18 19 **VIII. ENFORCEMENT OF THIS ORDER**

20 8.1 Pursuant to RCW 70.105D.050, this Order may be enforced as follows:

- 21 A. The Attorney General may bring an action to enforce this Order in a state
22 or federal court.
- 23 B. The Attorney General may seek, by filing an action, if necessary, to
24 recover amounts spent by Ecology for investigative and remedial actions
25 and orders related to the Site.

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- C. In the event the Navy refuses, without sufficient cause, to comply with any term of this Order, the Navy will be liable for:
- (1) up to three times the amount of any costs incurred by the state of Washington as a result of its refusal to comply; and
 - (2) civil penalties of up to \$25,000 per day for each day it refuses to comply.
- D. This Order is not appealable to the Washington Pollution Control Hearings Board. This Order may be reviewed only as provided under RCW 70.105D.060.

8.2 Effective date of this amendment to the Order: March 27, 2002.

BY: _____ DATE: _____
Tim Nord, Section Manager
Toxics Cleanup Program
Washington Department of Ecology